

WHAT IS CLAIMED IS:

1. A lithographic apparatus comprising:
 - an illumination system to provide a beam of radiation;
 - a support structure configured to support a patterning device, the patterning device serving to impart the beam of radiation with a pattern in its cross-section;
 - a substrate holder configured to hold a substrate;
 - a projection system to project said patterned beam of radiation onto a target portion of said substrate;
 - a positioning mechanism configured to position at least a portion of at least one of said support structure, said substrate table, said projection system, and said illumination system;
 - a transmitter configured to transmit electromagnetic radiation; and
 - a first transducer configured to receive and convert said electromagnetic radiation into at least one of a power signal and a control signal.
2. The lithographic apparatus of Claim 1, wherein said electromagnetic radiation contains information and said first transducer is further configured to generate said at least one of a power signal and a control signal representing the information.
3. The lithographic apparatus of Claim 2, wherein said transmitter is located outside the lithographic apparatus.
4. The lithographic apparatus of Claim 2, wherein the lithographic apparatus further comprises an energy storage device constructed and arranged to receive said at least one of a power signal and a control signal.

5. The lithographic apparatus of Claim 2, further comprising:

a sensor configured to sense a state of at least one of said illumination system, said projection system, said patterning device, and said substrate and to produce a first electric signal representing the state, and

a second transducer configured to convert said first electric signal into electromagnetic radiation and to transmit the electromagnetic radiation,

wherein the lithographic apparatus is further arranged to co-operate with a receiver for receiving the electromagnetic radiation transmitted by the second transducer and converting it into a second electric signal.

6. The lithographic apparatus of Claim 5, wherein said transmitter and said receiver are integrated into a first transceiver, said first transceiver being constructed and arranged to transmit and receive said electromagnetic radiation.

7. The lithographic apparatus of Claim 6, wherein the transmitter and receiver are integrated into a second transceiver, the second transceiver being constructed and arranged to transmit and receive said electromagnetic radiation.

8. The lithographic apparatus of Claim 1, wherein the electromagnetic radiation contains information and wherein the lithographic apparatus further comprises an additional transducer that is arranged to generate a control signal representing the information.

9. A lithographic apparatus comprising:

an illumination system to provide a beam of radiation;

a support structure configured to support a patterning device, the patterning device serving to impart the beam of radiation with a pattern in its cross-section;

a substrate holder configured to hold a substrate;

a projection system to project said patterned beam radiation onto a target portion of said substrate; and

a wireless signaling system configured to transmit and receive information-bearing electromagnetic radiation,

wherein the information contained in said information-bearing electromagnetic radiation is used to control at least a portion of said at least one of said support structure, said substrate table, said projection system, and said illumination system.

10. The lithographic apparatus of Claim 9, wherein said wireless signaling system comprises:

a transmitter configured to transmit said electromagnetic radiation; and

a first transducer configured to receive and convert said electromagnetic radiation into a first electrical signal containing the information which is used to control said at least a portion of said at least one of said support structure, said substrate table, said projection system, and said illumination system.

11. The lithographic apparatus of Claim 10, further comprising an energy storage device constructed and arranged to receive said first electrical signal.

12. The lithographic apparatus of Claim 10, wherein said wireless signaling system further comprises:

a sensor configured to sense a state of at least one of said illumination system, said projection system, said patterning device, and said substrate and to produce a second electric signal representing the state, and

a second transducer configured to convert said second electric signal into electromagnetic radiation and to transmit the electromagnetic radiation, and

a receiver for receiving the electromagnetic radiation transmitted by the second transducer and converting it into a third electric signal.

13. The lithographic apparatus of Claim 12, wherein said transmitter and said receiver are integrated into a first transceiver, said first transceiver being constructed and arranged to transmit and receive said electromagnetic radiation.

14. The lithographic apparatus of Claim 13, wherein the transmitter and receiver are integrated into a second transceiver, the second transceiver being constructed and arranged to transmit and receive said electromagnetic radiation.

15. A device manufacturing method, comprising:
providing a substrate;
providing a beam of radiation using an illumination system;
using a patterning device to impart the beam with a pattern in its cross-section;
projecting the patterned beam of radiation onto a target portion of the substrate; and
sensing a state of at least one of said illumination system, said projection system, said patterning device, and said substrate;
producing an electric signal representing the state;
converting said electric signal into electromagnetic radiation by a first transducer; and
wirelessly transmitting said electromagnetic radiation to a receiver.

16. A lithographic method comprising:
transmitting a beam of radiation through an illumination system;
patterning said beam of radiation with a patterning device;
projecting said patterned beam of radiation onto a substrate;
positioning at least one of said patterning device and said substrate relative to the other to enable different portions of said substrate to be imaged; and
wirelessly controlling at least one of said transmitting, patterning, projecting and said controlling.

17. A lithographic apparatus comprising:
an illumination system to provide a beam of radiation;
a support structure that supports a patterning device, the patterning device serving to impart the beam of radiation with a pattern in its cross-section;
a substrate holder configured to hold a substrate;
a projection system that projects the patterned beam of radiation onto substrate; and
means for wirelessly interfacing with at least one of said illumination system, said support structure, said substrate holder and said projection system.